

HEMIPTERA-HETEROPTERA¹

FROM THE WILLIAMS GALAPAGOS EXPEDITION

By H. G. BARBER

(Figs. 47-50 incl.)

The Hemiptera-Heteropterous fauna from the Galapagos Islands so far as known is rather limited. I have been able to find only twenty-one species so far listed from the islands and two species of Halobates from neighboring waters. Twelve of these are restricted to the islands and ten are also neotropical species. From the collections made by William Beebe on this expedition of the New York Zoological Society, I have been able to add nine more species to the island fauna, seven of which are new, and one new species of *Halobates*. The drawings have been made by myself.

Family PENTATOMIDAE

Acrosternum (Nezara) viridans Stål.

Acrosternum (Nezara) viridans Stål. Stål, *Freg. Eugen. Resa-Insects*, 228, 1859; *Enum.*, II, 41, 1872. Howard, *Proc. U. S. Nat. Mus.*, XII, 194, 1889. Heidemann, *Proc. Washington Acad. Sci.*, III, 365, 1901.

Two from James Island, April 5, and two from Chittam Island, April 7. This has been recorded by Stal also from Panama and Peru.

Podisus (Arma) sordidus Stal.

Podisus (Arma) sordidus Stål. Stål, *Freg. Eugen. Resa-Insects*, 221, 1859; *Enum.*, I, 51, 1870.

Two from Indefatigable Island, April 22. Also known from Peru.

Family COREIDAE

Stenocephalus insularis Dallas.

Stenocephalus insularis Dallas. Dallas, *List Hem.* II, 482, 1852. Stål, *Enum.*, I, 218, 1870. Heidemann, *Proc. Washington Acad. Sci.*, III, 365, 1901.

Ten from James Island, April 4 and 5, and Albemarle Island, April 6.

Dallas described this species from material obtained by Charles Darwin on his voyage of the *Beagle*.

Harmostes disjunctus sp. nov.

(= *H. serratus* Heidemann nec Fabr.)

Color yellow-brown, with paler costal margin of corium and the femora spotted with brown; membrane obscurely spotted. Head finely granulate, as

¹ Cont. Department Trop. Research No. 187.

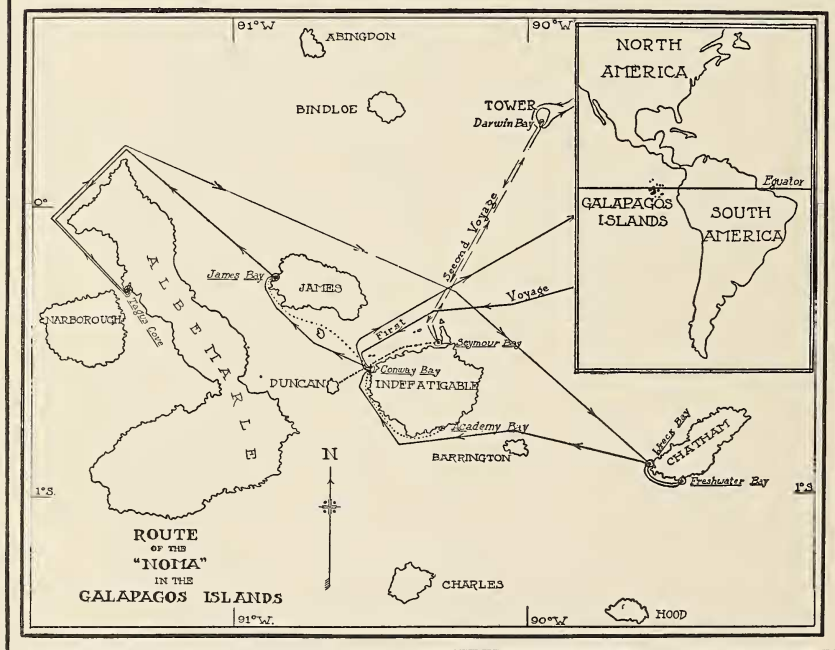
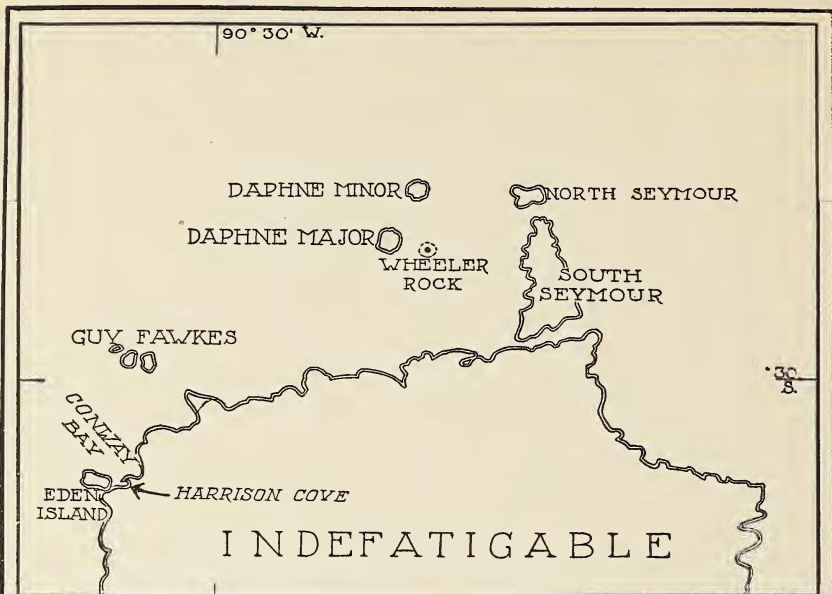


Plate A. SKETCH MAP OF GALAPAGOS ISLANDS
Route of the *Noma*, and details and location of the Archipelago.

long as wide; tylus elevated, acute, about attaining middle point of the first antennal segment; antenniferous tubercles acute, nearly porrect, slightly turned outwards towards apex, extended forward on a line with the apices of the jugae; vertex with a narrow median sulcus extending from line of the ocelli to near base of the tylus. Antennae 3.75 mm. long, with granulated basal segment stout, 1.5 mm. long; second and third segments much more slender, cylindrical, neither especially incrassate at their apices, second segment 1 mm., third 1.5 mm. long; piceous terminal segment spindle-shaped, one-half as long as third segment. Head paler beneath with a piceous streak behind the bucculae, the latter disappearing on a line with the front margin of the eyes. Rostrum extending only to the anterior part of the posterior coxae, the basal segment reaching to a line drawn across posterior margins of the eyes. Pronotum only a trifle shorter than head and just twice as wide across humeral angles as it is long; lateral margins slightly and evenly arcuate, the edge reflexed and provided with a few rather weak, pale teeth, the anterior ones forming an acute anteriorly directed process; surface, except for the cicatrices and along the narrow margin before these, closely, almost confluent, coarsely punctate; provided with a median longitudinal pale carina; humeral angles rounded or obtusely angled, not projecting much beyond costal margin of corium; humeri somewhat roundly elevated within and these connected by a somewhat evident transverse ridge, placed just before the posterior margin of the pronotum.

Scutellum more shallowly punctate; apical part narrow, evenly rounded, with the edge pale, elevated, the surface within scooped out. Corium and clavus concolorous or the former slightly variegated with pale brown; these parts evenly, coarsely, almost confluent punctate; the pale impunctate costal margin reflexed and provided with 11 to 12 almost equi-distant dark brown spots; the outline of the costal margin, viewed from above, scarcely at all concavely sinuate, the greatest width across the hemielytra being two-thirds the distance from the base; apex of the corium, at least in the male, reaches to the apex of the abdomen. Membrane hyaline, with scattered indistinct brownish spots. Beneath paler than above. Central disk of sternites with a piceous spot, widest on the mesosternum; meso- and meta-pleura closely, shallowly punctate with faint indications of darker maculations. Venter pale yellow-gray, with numerous rosy red spots and with a short transverse piceous fascia on the sides of the 4th, 5th and 6th segments, placed closer to the lateral margins than to the median line; anteriorly very obscurely sulcate in the middle. Legs pale ochraceous, the femora, except at base, much spotted with ferruginous-brown, the posterior ones about twice the diameter of the others and armed beneath with three strong white spines with smaller, close set, dark spines between the distal two; apex reaches back only as far as the apex of the corium.

Length male 6 mm.

Type and paratype males: Indefatigable Island.

This species is very close to *H. affinis* described by Dallas from an unknown locality and fixed by Van Duzee in 1909 for the Florida species. I have Florida as well as numerous West Indian specimens for comparison. There is no doubt that this Galapagos species is what Heidemann, 1901, misidentified as *serratus* Fab. I have seen Heidemann's specimen in the collection of U. S. N. M.

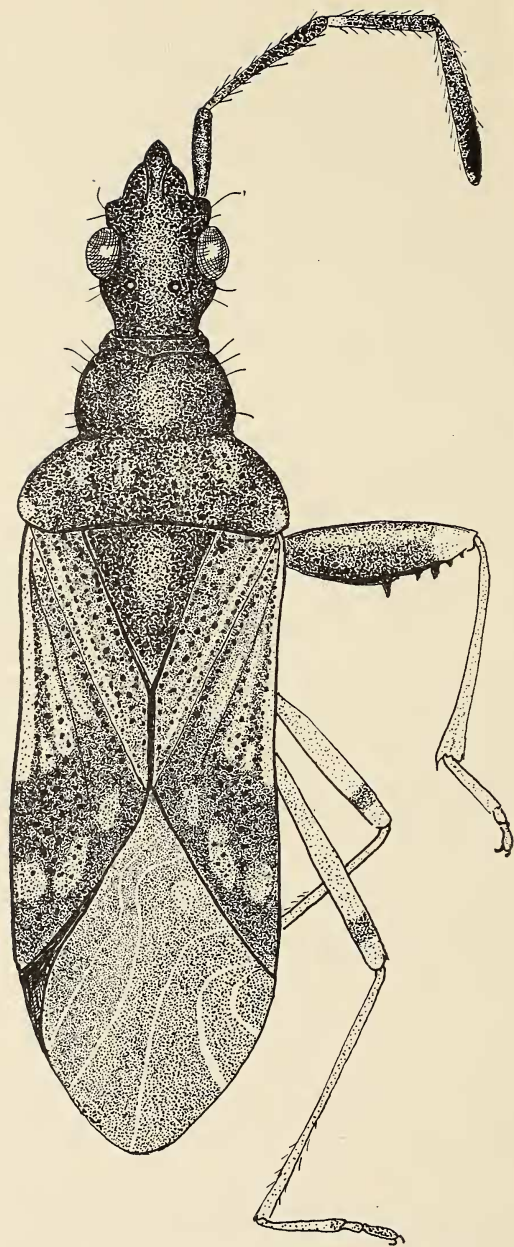


Fig. 47. *HERAEUS PACIFICUS* sp. nov.

H. disjunctus differs from *serratus* especially by its more quadrate head, shorter rostrum, less pronounced spinous process of tylus and antenniferous tubercles. From *affinis* it may readily be separated by the following characters: the different relative lengths of the second and third antennal segments, straighter costal margins, corium reaching to apex of the abdomen, shorter posterior femora and almost non-sulcate venter. By its denticulate pronotal margin it differs from the following South American forms: *raphimerus* Spin., *minor* Spin., *marmoratus* Bl., *apicatus* Stal and *prolixius* Stal.

Corizus hyalinus Fabricius.

Corizus hyalinus Fabricius. Fabricius, *Ent. Syst.* 168, 1794.

Four from Daphne Major April 22, and three from Tower Island April 28.

These are all dark specimens of this widely distributed species, not hitherto reported from these islands. *C. lugens* Stal is unknown to me.

Nysius (Cymus) marginalis Dallas.

Nysius (Cymus) marginalis Dallas. Dallas, *List Hem.* II, 556, 1852. Stål, *Freg. Eugen. Ins.*, 252, 1858; *Enum.* IV, 122, 1874. Butler, *Proc. Zool. Soc. London*, 88, 1877. Heidemann, *Proc. Washington Acad. Sci.*, III, 366, 1901.

Eight from Daphne Major, April 22. So far as known this is an endemic species.

***Heraeus pacificus* sp. nov.**

(Fig. 47)

Color dull fusco-ferrugineous, with anterior lobe of pronotum, scutellum and sternum black; posterior lobe of pronotum with four streaks and humeral angles brown; corium with narrow costal margin to just beyond middle, a sub-apical spot, two others near posterior margin and the inner field fasciate with testaceous; membrane brown with pale veins. Head and anterior lobe of pronotum with a few long setae. Head equally long as pronotum and slightly narrower across eyes than width of posterior lobe of pronotum, transversely finely granulose with sparse covering of very fine appressed, grayish pubescence; apex of tylus reaching midway on basal antennal segment, anteocular distance to apex of antenniferous tubercles two-thirds the length of an eye, postocular region gradually contracted. Antenna with extreme base of second and third segments pale, slightly enlarged basal segment but slightly longer than the anteocular part of head, second segment about twice as long as first and one-third longer than third, fourth segment subequal to second; all segments except basal with fine short hairs. Rostrum reaching to middle of hind coxae, the enlarged basal segment dark castaneous, remainder, except at apex, pale; first segment reaching mid-way on postocular region of head, second segment one-third longer, third a little shorter than second. Pronotum as long as head, with the two lobes of nearly equal length, the anterior one dull black provided with a few erect hairs, posterior lobe sparsely, finely punctate, one-third wider than anterior lobe; rounded humeri and four longitudinal streaks paler. Scutellum dull black, disk somewhat paler either side of the middle, extreme apex testaceous. Hemelytra non-pilose; clavus finely, closely punctate with outward pale, smooth ruga reaching nearly to apex; corium sparsely punctate between the veins. Membrane dark brown with distinct pale veins. Sternum dark

with rim of all acetabuli and the posterior flange of the meta-pleura ferruginous, enlarged fore femora shining dark castaneous with only the apex pale, armed beneath with several strong teeth beyond the middle; fore tibia slightly curved, pale stramineous, infuscated at apex; middle and hind femora pale stramineous with a pre-apical castaneous ring; tibiae pale, infuscated at tip; all tarsi pale, infuscated apically. Venter ferruginous with coating of fine appressed pale hairs.

Length 6 mm.

Type.—Male, James Island, April 4; *allotype*,—James Island, April 4; two *paratypes*, male and female, James Island, April 4. This species is rather closely related to *H. plebejus* Stål, but is darker in color and less pilose, the antennae longer and the diameter of corium relatively wider.

***Orthaea insularis* sp. nov.**

(Fig. 48)

Sparsely setose on head, pronotum and scutellum. Dull black. Hemelytra with somewhat more than anterior half, a preapical subcrescentic fascia and wide posterior margin of meta-pleura sordid whitish; remainder of the corium fusco-ferruginous with the area near inner apical angle frequently ferruginous. Membrane heavily infuscated, with a broad, pale patch at apex. Legs castaneous with the intermediate and posterior femora pale at base and the tarsi testaceous. Head faintly rugulose with fine appressed gray hairs, equally long as width across eyes, one-fifth shorter than anterior lobe of pronotum; tylus rufous, reaching midway on basal segment of antennae. Antennae testaceous, with terminal segment somewhat darker, second segment twice as long as first, third, one-third to one-fourth shorter, fourth segment very nearly as long as second. Rostrum castaneous, basal segment darker, apex of fourth segment reaching just past intermediate coxae. Pronotum with anterior lobe dull black, sparsely setose, twice as long and one-third narrower than the posterior lobe, the latter dark velvety-brown, anteriorly next to the sinus somewhat pruinose and there with a few scattered punctures; humeri concolorous; posterior margin very concave before the base of the scutellum. Sternum dull black with the posterior expanded margin of the metasternum white. Legs with the anterior femora much incrassate, more so in the male, armed except for a short distance at base with 8–10 short, stout teeth arranged somewhat in a double series; tibia and tarsi paler. Intermediate and hind legs with nearly basal half of femora and the trochanters whitish, remainder of femora and the tibia castaneous, with the tarsi sordid stramineous. Scutellum dull black, sparsely punctate, apical half depressed. Hemelytra with clavus fuscous at base and apex and provided with several rows of fuscous punctures; the inner longitudinal area sometimes smudged with fuscous; the anterior whitish part of the corium sparsely punctate with fuscous and with an abbreviated infuscated patch midway along the claval suture; the preapical crescentic whitish fascia reaching to the costal margin and provided with a few scattered fuscous punctures; the broad fusco-ferruginous fascia sharply defined anteriorly and about the preapical fascia. Membrane dark smoky-brown, with the veins towards base and a broad patch occupying nearly the whole apex beyond the middle,

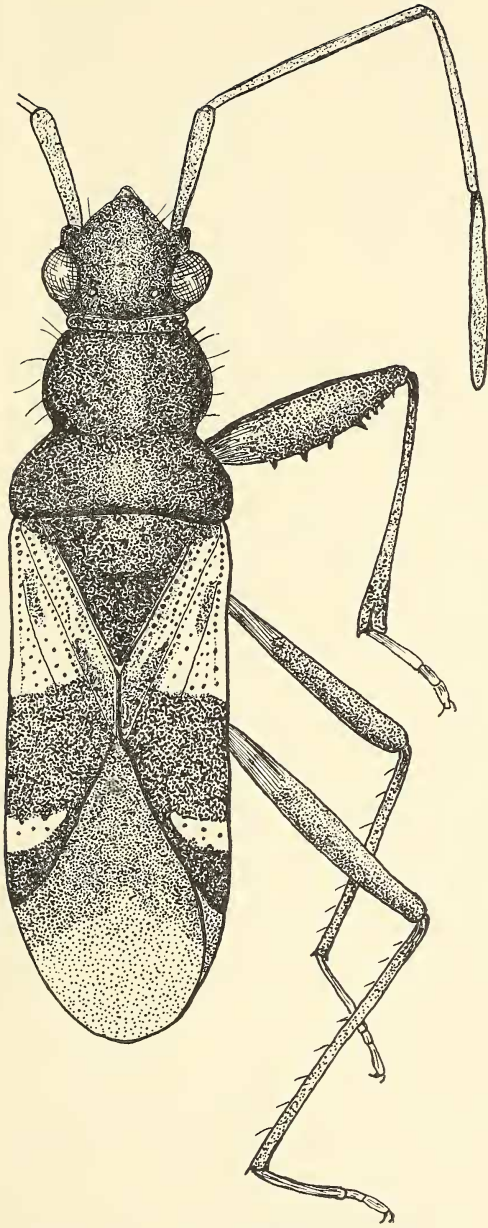


Fig. 48. *ORTHAEA INSULARIS* sp. nov.

pale. Venter shining castaneous with sparse covering of fine appressed hairs. Length 6.5 mm.

Type: Male and *allotype*, James Island, April 4, 1923. *Paratypes*: three males and nine females from James Island, male and female from South Seymour Island, female from Albemarle Island and two nymphs from Indefatigable Island.

This species is related to the dark form of *O. bilobata* Say, but is quite differently colored and marked. The anterior lobe of the pronotum in the male is relatively longer than in the female and often more swollen.

Family PYRRHOCORIDAE

Dysdercus concinnus Stål.

Dysdercus concinnus Stål. Stål, *Oefv. Vet Ak. Forh* p. 198, 1861; *Enum. Hem.* 1, p. 121, 1870. Distant, *Biol. Cent. Amer. Rhynch.* 1, p. 231, Pl. 21, figs. 11, 12, 15, 1883. *Dysdercus mundus* Walk., *Cat. Hemipt. Br. Mus.*, V, p. 188, 1872.

A single specimen was taken on Indefatigable Island. It is a fairly common neotropical species not hitherto reported from the Galapagos Islands, in fact it is the only member of the family yet found there.

Family MIRIDAE

Creontiades fuscus sp. nov.

(Plate 49)

Head, pronotum, scutellum, hemielytra anteriorly and posteriorly, antennae with basal segment, narrow base and apical third of second, first segment of rostrum, most of sternum and venter, femora and posterior tibia, dark brown or fuscous; posterior half of clavus and broad transverse area posteriorly extended along the costal margin, pale yellow-white.

Head shading to brown on the vertex, .75 mm. long, .8 mm. wide across the eyes; diameter of vertex very nearly equal to diameter of an eye; median longitudinal sulcus distinct; clypeus separated from the vertex by a distinct furrow. Antenna with basal segment .75 mm. long, second very nearly 2 mm., third 1.5 mm. and the fourth about .5 mm. long; the last two smoky-brown in color with the base of the third paler. Rostrum sordid stramineous, reaching to apices of posterior coxae. Pronotum somewhat shining, rugose, shading into paler brown on the disk, sparsely coated with fine appressed hairs, 1.5 mm. wide and 1 mm. long, lightly depressed behind and between the slightly evident callosities. Scutellum very distinctly transversely depressed before base, posterior to which the disk is quite convex. Hemielytra impunctate, with sparse fine coating of appressed pale hairs; apex of corium not reaching tip of abdomen. Membrane dark smoky-brown. Sternum and venter fuscous-brown. Coxae, trochanters, odoriferous orifices and outer margin of the meta-pleura stramineous. Anterior and intermediate tibia pale stramineous with a faint prebasal, premedian and apical band, brown; tarsal segments tipped with brown.

Length, male 4 mm.; female, 5.5 mm.

Type: female, Indefatigable Island; *allotype* topotypic. *Paratypes*: male, Indefatigable Island and female, James Island.

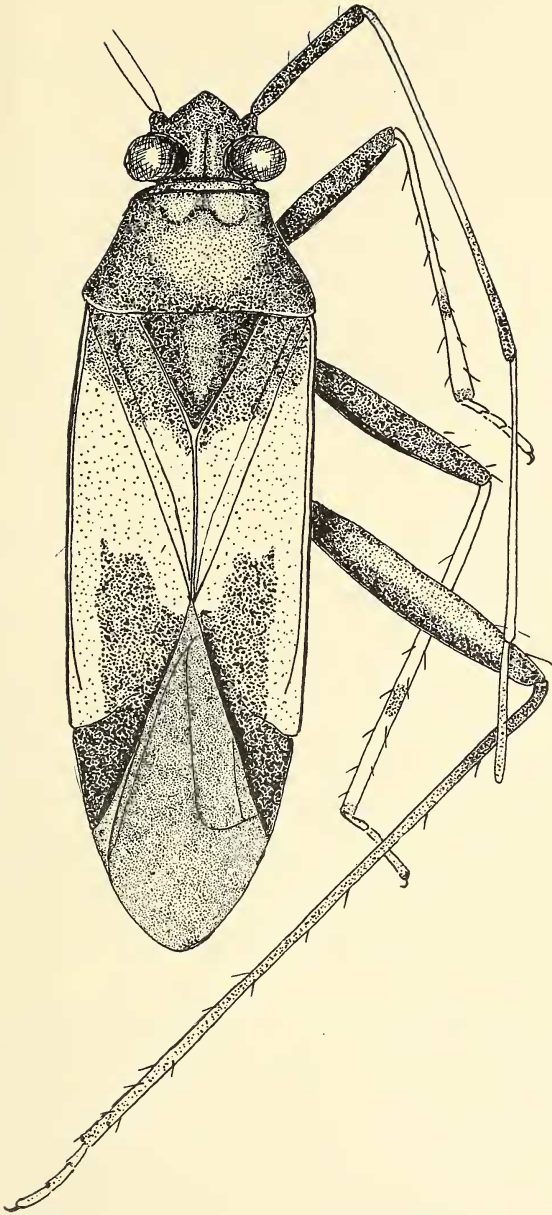


Fig. 49. *CREONTIADES FUSCOSUS* sp. nov.

I am indebted to Dr. H. H. Knight who has examined this and the following species and placed them generically for me.

Psallus insularis sp. nov.

Color sordid stramineous with sparse coating of depressed hairs, fringed with a few long hairs along the lateral margin of the pronotum. Head somewhat shining, nearly .25 mm. long and .5 mm. wide. Antennae a little dusky, short, with the two basal segments relatively stout; first segment reaching just beyond apex of the head, second segment .65 mm. long, third one-half the length of the second, the fourth a trifle over one-half the length of third. Rostrum, except at apex, pale, reaching to apices of posterior coxae. Pronotum .75 mm. wide and .3 mm. long. Scutellum with width equal to length, somewhat shining, frequently a little dusky. Hemelytra somewhat shining, with the costal edge nearly straight. Membrane lightly infuscated. Sternum and venter concolorous, pale. Legs pale, femora with a few fine black hairs beneath and tibia provided with a few short black setae. Tarsi, except at apices, pale. Length, 2 mm.

Type: male, James Island; *allotype*, topotypic. *Paratypes*: three and eight females, James Island. The specimens are all in rather poor condition.

Family REDUVIIDAE

Repipta annulipes sp. nov.

Male moderately elongate, sparsely pilose, somewhat shining; stramineous in color. A broad fascia on the sides of the head before and behind the eyes, apices of the jugae and tylus, narrow rim about the ocelli, anterior pronotal tubercles, a broad fascia on the propleura, two subparallel fascia on the mesopleura meeting anteriorly, a single fascia on the meta-pleura, a broad longitudinal fascia along the sides of the venter continuous with the fascia of the pleura, the outer margins of ventral segments 2-5 posteriorly and the costal margins fusco-piceous. The posterior lobe of pronotum, bases of the four spines and two discal spots posteriorly on the anterior lobe and the hemelytra dark brown or fuscous. The antennae and legs are pale stramineous, the femora twice banded beyond middle with brown, the tibiae with two sub-basal bands and the apices brown.

Head equally long as the pronotum, shining, provided with two mediocre pale spines at base of the antenniferous tubercles, these not as long as one-third the length of an eye; postocular region a little longer than antecocular, much narrowed posteriorly to form a short collum, somewhat swollen behind the eyes, the sides lightly rounded and slightly converging posteriorly towards collum, the latter rather sharply set off. Antennae with basal segment stramineous, sparsely setose, three and one-half mm. long, slightly embrowned at apex; second segment slightly embrowned at apex, one mm. long, third segment slightly incrassate, narrowly pale at base, 5 mm. long, fourth segment brown, about 1.5 mm. long. Rostrum pale with little difference between the length of the first and second segments. Pronotum sparsely covered with incumbent grayish hairs, especially on the posterior lobe; anterior lobe shining, the deep

central longitudinal groove evanescent just before the anterior margin; the posterior lobe finely rugulose, the four spines mediocre but slightly longer than the preocular ones, pale at apices. Scutellum shining stramineous, produced into a short, somewhat elevated, acute process. Hemelytra brown with the costal margins infuscated, as on the posterior lobe of the pronotum, the surface has a sparse covering of incumbent grayish hairs, the apex sordid stramineous; the apical quadrangular cell over twice as long as wide. Membrane hyaline, extending well beyond apex of abdomen, the median vein embrowned. Connexival margins of abdomen unarmed. Venter sparsely setose, with a broad black longitudinal vitta placed nearer to lateral margin than to median line, this provided anteriorly on segments 2 to 5 with an oblique pale depression. Genital segment provided with a rather stout upwardly curved spine. Legs densely pilose.

Length, 11 mm.

Type: Male, Indefatigable Island.

Family NABIDAE

Nabis punctipennis Blanch.

One female, James Island, April 5. I follow Heidemann in the identification of this species. Without specimens for comparison it is impossible to be sure of the identity of this species. It certainly is very close to *N. ferus*.

Family TINGIDAE

Corythaica renormata sp. nov.

Pale cinereous, with antennae (only the two basal segments present) and legs pale stramineous. The following parts infuscated: hood dorsally, especially the areoles of it, a few of the veins of the paranota very faintly, the tumid elevation of the corium inwardly, costal areole and veins bounding it in the expanded part, a cross-vein at the rather abrupt termination of the arcuated part, the fourth cross-vein beyond this, all of the veins bounding the areoles along the posterior margin of the corium, broadly and those bounding the areoles of the membrane so broadly as to make these parts clouded; a pale translucent spot in the middle of the membrane occupying two large areoles.

Hood somewhat elongate, nearly twice as long as its greatest diameter behind the middle, acute anteriorly, rounded behind, provided with about seven sunken areoles, carinate in the middle; seen from the side it is more arched dorsally and does not extend so far forward beyond the head as in *C. carinata*. The lateral margins of the pronotum strongly elevated, compressed and strongly arcuated before the acutely produced, almost erect paranotal angles; these provided with only about four large areoles confined to the margins. The median carina a little longer than the hood, more arched before the middle, not more markedly elevated than the lateral carina and not distinctly areolate except for one or two large areoles in the widest part; the disk anteriorly embrowned, with large obscure shallow punctures, posteriorly to which the disk is provided with small, clean-cut punctures, the posterior prolongation obscurely areolate. Hemieleytra strongly, arcuately expanded

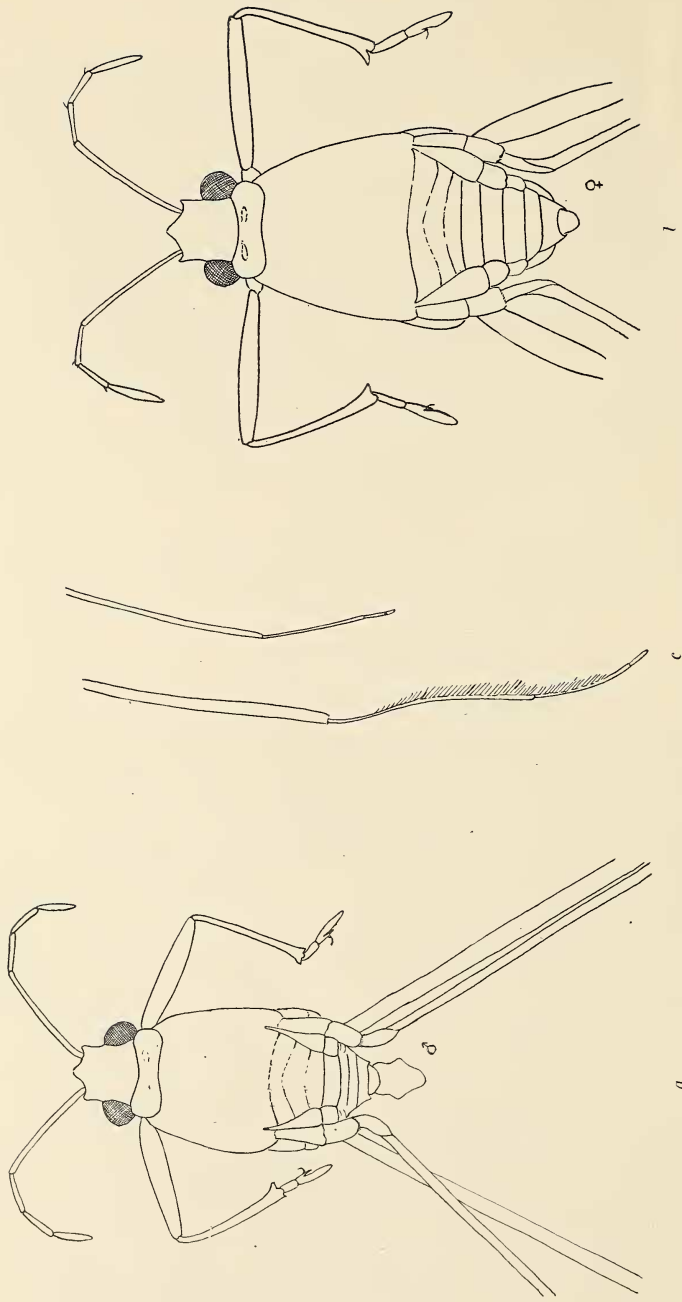


Fig. 50. *HALOBATES ROBUSTUS* sp. nov.

a, male; b, female; c, middle and hind legs.

one-third way from base, the costal area wide, provided with a single row of about sixteen areoles, a double areole just posterior to the widest part; the costal areoles are subquadrate anteriorly and posteriorly with the four cells just behind the arcuated part wider than long; the subcostal area with three irregular rows of shallow areolate-like punctures; the discal area very nearly equally long as the remainder of the hemielytra, provided with small shallow areoles, not as evident as in *C. planaris*; the tumid elevation is very pronounced opposite to the widest part of the hemielytra, almost evenly declivous anteriorly and posteriorly and provided with about three rows of areoles at the highest part. The membrane is provided with large areoles. Body beneath dark castaneous, with margins of bucculae and pleurae in part paler.

Length: 3 mm.; width of pronotum, .95 mm.; width of hemielytra, 1.15 mm.

Type: female, Daphne Major, April 24.

This differs from *carinata* in being relatively much wider with different shape of the hood and in the acute paranotal angles, etc. It is more closely related to *planaris* from which it can readily be distinguished by its narrower form, less expanded paranotal angles, less elevated pronotal carinae and differences in the arrangement of the areoles of the coastal region. Dr. C. J. Drake who has examined this specimen pronounces it as new.

Family SALDIDAE

Pentacora rubromaculata Heid.

Pentacora rubromaculata Heid. Heidemann, *Proc. Wash. Acad. Sci.* III, 368, 1901.

Only a single specimen was obtained.

Family GERRIDAE

***Halobates robustus* sp. nov.**

(Fig. 50)

Form rather robust, widest across the apex of the mesonotum. Antennae and fore legs shining brownish black, with the usual coating of fine hairs; the intermediate and hind legs somewhat shining, brownish black, covered with fine hairs. Body black, slightly shining, densely coated with fine pale pubescence; on the sides and ventrally, with a much denser coating of fine incumbent hairs, giving a silvery white appearance to those parts. Base of the head between the eyes furnished with two oblique yellowish-brown fascia which do not quite meet in the central line. Dorsally with the posterior margins of the exposed abdominal segments narrowly and more or less distinctly yellowish-brown; ventrally with the posterior margins of these segments more distinctly bordered with yellow-brown and the first genital segment in the female is posteriorly and on the sides and the two genital plates of the second for the most part, yellowish; in the male the last genital segment is black.

The head is almost twice as wide as it is long; the apices of the antenniferous tubercles are rather acutely prominent but not extended quite as far forward as the median lobe of the head. The antennae are rather slender, almost two-thirds as long as the body, the first segment only a trifle shorter than the other

three taken together; length of the respective segments as follows: male, I 1.35 mm., II .5 mm., III .45 mm., IV .5 mm.; female, I 1.6 mm., II .6 mm., III .5 mm., IV .56 mm. The pronotum is four times as wide as long, just anterior to the middle with a shallow transverse depression on either side. The mesonotum abruptly widened in front just behind the pronotum from whence the sides are gradually rounded to the widest part just before the base of the middle legs; the greatest width in the male is 1.80 mm., in the female 2.30 mm.; in the male the dorso-ventral dimension is 1.22 mm., in the female 1.65 mm. The fore legs are rather stout with the apical tibial tooth well-developed; the length of the respective segments as follows: male, femur 1.6 mm., tibia 1.35 mm., tarsus .66 (first segment .165 mm., second .495); female, femur 2 mm., tibia 1.76 mm., tarsus 1.1 mm. (first segment .38 mm., second segment .72 mm.). The middle legs are 11.49 mm. long in the male and 12.31 mm. long in the female, with the greatest diameter .25 mm. one-quarter way from the base; the length of the respective segments is as follows: male, femur 4.67 mm., tibia 4.4 mm., tarsus 2.42 mm. (first segment 1.65 and the second .77 mm.); female femur 5.06 mm., tibia 4.5 mm., tarsus 2.75 mm. (first segment 1.98 and the second .77 mm.); the apical two-thirds of the tibia provided with a fringe of fine curved hairs over twice as long as the diameter of the tibia and agglutinated at their apices. The hind legs are much shorter and more slender, being about 6.71 mm. long in the male and 7.72 mm. in the female, with the greatest diameter .165 mm.; the relative length of the respective segments is as follows: male, femur 3.85 mm., tibia 2.2 mm., tarsus .66 mm. (first segment .44 mm., the second .22 mm.). The abdomen consists of the usual nine segments which may best be shown in the illustration.

Length: male, 3.85 mm., width 1.80 mm.; female, 4.5 mm., width 2.3 mm.

Type: male, Conway Bay, Indefatigable Island.

Allotype and 24 *paratypes* taken with the type.

This species seems most closely related to *sericeus* but besides its difference in size the relative lengths of the segments of the antennae and legs will serve to distinguish it.

This is one of the series of scientific papers of the Harrison Williams Galapagos Expedition, under the directorship of William Beebe, sent out by the Department of Tropical Research of the New York Zoological Society. The general account and narrative of the expedition, together with the natural history and photographs of the fauna, are embodied in a volume by William Beebe, published by G. P. Putnam's Sons, under the auspices of the Zoological Society. Its title is "Galapagos; World's End."